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both side portions 17 and formed to have a channel section shape. An upper plate 19 is attached to the upper sub-portion of the open portion of the casing 4. A lower plate 21 is attached to the lower sub-portion of the open portion of the casing 4 under the upper plate 19. Four load supports 18 are formed on the upper ends of the four corners of the casing 4. A base plate 16 is attached to the bottom of the casing 4. An opening 20 is formed between the upper and lower plates 19 and 21 on the rear portion of the casing 4 to facilitate a wiring process. A rear cover 22 is positioned over the opening 20 after the wiring process is carried out to connect the drive means 12 with a control unit C.

In the washing machine with a tilted washing tub of the present invention, the outer tub 6 is tilted and supported by the suspension rods 10 so as to prevent the front upper portion of the outer tub 6 from being brought into contact with the front portion of the casing 4 after the outer tub 6 is inserted into the casing 4. In this case, the rear lower portion 6 of the outer tub 6 is projected rearward by the tilting of the outer tub 6 is projected through the opening 20 formed on the rear portion of the casing 4, thereby preventing the outer tub 6 from being brought into contact with the rear portion of the casing 4. The rear cover 22 is attached to the casing 4 to cover the opening 20 after a wiring process is performed utilizing the opening 20.

The rear cover 22 may be fabricated of resin or a thin iron plate. The rear cover 22 should have a protrusion 24 to prevent the outer tub 6 from being brought into contact with the rear cover 22 in consideration of the portion of the outer tub 6 projected rearward by the tilting of the outer tub 6 and the widths and magnitudes of vibrations of the outer tub 6 produced during a spin-drying process.

The upper portion of the protrusion 24 of the rear cover 22 is formed to have a slope to correspond to the slope of the tilted outer tub 6. The protrusion 24 of the rear cover 22 is preferably shaped in the form of a trapezoidal cross section in consideration of the structural strength of the rear cover 22. However, it can be shaped in the form of a triangular or circular cross section in accordance with the forming materials of the rear cover 22.

In addition, as shown in FIG. 4, a shock-absorbing element 39 is attached to the inner surface of the protrusion 24 of the rear cover 22 to prevent the outer tub 6 from being brought into contact with and deforming the rear cover 22 by the great vibration of the rear cover 22, thereby preventing the rear cover 22 from being damaged.

The protrusion 24 can be variously shaped according to the size and shape of the portion of the outer tub 6 projected through the opening 20 of the casing 4.

FIG. 5 is a perspective view showing a construction for assembling the rear cover 22 and the casing 4 together in detail. A plurality of first holding projections 28 are regularly formed on the lower end of the upper plate 19 over the opening 20 so as to hold the upper portion of the rear cover 22, a plurality of second holding projections 30 are regularly formed on the upper portion of the lower plate 21 under the opening 20 so as to hold the lower portion of the rear cover 22, and elastic, laterally open clips 34, the number of which corresponds to the number of the first holding projections 30, is formed on the upper end of the rear cover 22 so as to engage with the first holding projections 30.

Additionally, a plurality of notches 36 are formed on the upper end of the rear cover 22 among the clips 34 so as to minimize the sliding distance of the rear cover 22 while the rear cover 22 is assembled with the casing 4. The elastic clips 34 are preferably bent at their open ends to the outside

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at a predetermined angle so as to allow the elastic clips 34 to easily engage with the first holding projections 28.

The rear cover 22 is assembled with the casing 4 in such a way that the lower portion of the rear cover 22 is held by the second holding projections 30, and the first holding projections 28 are engaged with the clips 34 of the rear cover 22 by sliding the rear cover 22 while the first holding projections 28 are made to pass through the notches 36 formed on the upper end of the rear cover 22.

As described above, the present invention provides a washing machine with a tilted washing tub in which its casing body has a hexahedral shape, thereby allowing one type of casing to be commonly used for a washing machine with a tilted washing tub and a washing machine with a perpendicular washing tub.

In addition, the front portion of the casing of the washing machine of the present invention is flat and vertical, so a user can easily put laundry into and remove laundry from its washing tub.

Furthermore, the rear cover of the washing machine of the present invention can be fitted into the casing in a slide fashion, so the rear cover can be easily attached to the casing, thereby allowing the assembly of the washing machine to be easily performed.

Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

What is claimed is:

1. A washing machine comprising:

a casing on a rear portion of which an opening is formed, said opening being covered with a rear cover provided with an outward protrusion;

a washing tub having outer and inner tubs, said outer tub being positioned in the casing and being tilted forward at a predetermined angle for containing washing water, said inner tub being positioned in said outer tub for washing and spin-drying laundry, and wherein a rear lower portion of said tilted outer tub projects rearwardly through said opening to an internal space of the protrusion of said rear cover; and

means for driving and rotating the outer tub.

2. The washing machine according to claim 1, wherein said casing has a front portion relatively flat and perpendicular with respect to a bottom of said washing machine.

3. The washing machine according to claim 1, wherein said casing further includes a body integrally comprised of a front portion and a pair of side portions and formed having a channel section shape, an upper plate attached to an upper sub-portion of an open portion of the casing, and a lower plate attached to a lower sub-portion of the open portion of the casing under the upper plate, thereby forming said opening between said upper and lower plates.

4. The washing machine according to claim 1, wherein said protrusion of the rear cover is shaped in the form of a trapezoidal cross section.

5. A washing machine comprising:

a casing having a rear portion on which an opening is formed, said opening being covered with a rear cover provided with an outward protrusion;

a washing tub having outer and inner tubs, said outer tub being positioned in the casing and being tilted forward at a predetermined angle for containing washing water,

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said inner tub being positioned in said outer tub for washing and spin-drying laundry;

means for driving and rotating the outer tub; and

a shock-absorbing element, said shock-absorbing element being attached to an inner surface of the protrusion of said rear cover so as to absorb impact energy when a projected portion of said tilted outer tub is brought into contact with said rear cover.

6. A washing machine comprising:

a casing having a rear portion on which an opening is formed, said opening being covered with a rear cover provided with an outward protrusion;

a washing tub having outer and inner tubs, said outer tub being positioned in the casing and being tilted forward at a predetermined angle for containing washing water, said inner tub being positioned in said outer tub for washing and spin-drying laundry;

means for driving and rotating the outer tub;

at least one first holding projection regularly formed on a lower end of said upper plate over said opening so as to hold an upper portion of said rear cover; and

at least one second holding projection regularly formed on an upper portion of said lower plate under said opening so as to hold a lower portion of said rear cover.

7. The washing machine according to claim 6, further comprising one or more clips, said clips being formed on an upper end of said rear cover so as to engage with said at least one first holding projection.

8. The washing machine according to claim 7, further comprising one or more notches, said notches being formed on the upper end of said rear cover so as to allow said first holding projections to pass through said rear cover when said rear cover is assembled with the casing.

9. The washing machine according to claim 6, further comprising one or more notches, said notches being formed on an upper end of said rear cover so as to allow said at least one first holding projection to pass through said rear cover when said rear cover is assembled with the casing.

10. The washing machine according to claim 6, wherein said casing is formed to allow a rear lower portion of said tilted outer tub to be projected through said opening to an internal space of the protrusion of said rear cover.

11. A washing machine casing comprising:

a body having a front portion, a pair of side portions, a base plate along a bottom of the casing and a tub portion;

a plurality of load supports being formed on upper ends of a plurality of upper corners of the casing;

an upper portion having a folding door;

a relatively flat and perpendicular rear portion, wherein said rear portion includes an upper plate, an open portion having an open portion facilitating a connection to a power source, and a lower plate, said upper plate being engaged with an upper sub-portion of the open portion and said lower plate being engaged with a lower sub-portion of the open portion, said rear portion being in parallel with said front portion; and

a rear cover covering said opening of the open portion and having a shock absorbing element, said shock-absorbing element being attached to an inner surface of said rear cover so as to absorb impact energy from said tub portion.

12. The washing machine casing according to claim 11, wherein said tub portion is for a tilted washing tub, said rear cover including a protrusion having a slope corresponding to

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a tilt angle of said tilted washing tub and extending in a direction away from said front portion of said casing.

13. The washing machine casing according to claim 12, further comprising:

at least one first holding projection regularly formed on a lower end of said upper plate over said opening so as to hold an upper portion of said rear cover; and

at least one second holding projection regularly formed on an upper portion of said lower plate under said opening so as to hold a lower portion of said rear cover.

14. The washing machine according to claim 13, further comprising one or more clips, said clips being formed on the upper end of said rear cover so as to engage with said first holding projections.

15. The washing machine casing according to claim 11, further comprising:

at least one first holding projection regularly formed on a lower end of said upper plate over said opening so as to hold an upper portion of said rear cover; and

at least one second holding projection regularly formed on an upper portion of said lower plate under said opening so as to hold a lower portion of said rear cover.

16. The washing machine according to claim 15, further comprising one or more clips, said clips being formed on the upper end of said rear cover so as to engage with said first holding projections.

17. The washing machine according to claim 15, further comprising at least one notch, said at least one notch being formed on the upper end of said rear cover so as to allow said first holding projections to pass through said rear cover when said rear cover is assembled with the casing.

18. The washing machine according to claim 15, further comprising at least one notch, said at least one notch being formed on the upper end of said rear cover so as to allow said first holding projections to pass through said rear cover when said rear cover is assembled with the casing.

19. A washing machine casing comprising:

a body having a front portion, a pair of side portions, a base plate along a bottom of the casing and a tub portion;

a plurality of load supports being formed on upper ends of a plurality of upper corners of the casing;

an upper portion having a folding door;

a relatively flat and perpendicular rear portion, wherein said rear portion includes an upper plate, an open portion having an open portion facilitating a connection to a power source, and a lower plate, said upper plate being engaged with an upper sub-portion of the open portion and said lower plate being engaged with a lower sub-portion of the open portion, said rear portion being in parallel with said front portion;

a rear cover covering said opening of the open portion;

at least one first holding projection regularly formed on a lower end of said upper plate over said opening so as to hold an upper portion of said rear cover; and

at least one second holding projection regularly formed on an upper portion of said lower plate under said opening so as to hold a lower portion of said rear cover.

20. The washing machine casing according to claim 19, wherein said tub portion is for a tilted washing tub, said rear cover including a protrusion having a slope corresponding to a tilt angle of said tilted washing tub and extending in a direction away from said front portion of said casing.

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